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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,608	06/21/2000	Valeria Palestini	00830127.7	7300

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EXAMINER

HESS, DANIEL A

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 02/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/598,608

Applicant(s)

PALESTINI ET AL.

Examiner

Daniel A Hess

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2000 is/are: a) ☒ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. EP 00830127.7, filed on Feb. 23, 2000.
2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

4. The following order or arrangement is preferred in framing the specification and, except for the reference to the drawings, each of the lettered items should appear in upper case, without underling or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

Title of the Invention.

Cross-Reference to Related Applications.

Statement Regarding Federally Sponsored Research or Development.

Reference to a "Sequence Listing," a table, or a computer program listing appendix submitted on compact disc (see 37 CFR 1.52(e)(5)).

Background of the Invention.

Field of the Invention.

Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.

Brief Summary of the Invention.

Brief Description of the Several Views of the Drawing(s).

Detailed Description of the Invention.

Claim or Claims (commencing on a separate sheet).

Abstract of the Disclosure (commencing on a separate sheet).

Drawings.

Sequence Listing, if on paper (see 37 CFR 1.821-1.825).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

6. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-9 and 12-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bard et al. (US 5,856,660) in view of Butterworth (US 5,010,241).

9. Re claims 1, 26 and 27: Bard's invention consists of systems to indicate the status of system for optically reading indicia such as barcodes (see title). As is a necessary feature of an optical indicia-reading system, there must be a means to acquire the optical code, having one or more acquisition light sources, as well as a means of reading this acquired code. There is also a means for indicating the result of the scan (figure 16A, item 1604; column 14, 25-30). Bard's system can provide the user with a variety of information in response to a barcode scan, as

shown in figure 16b. Bard also makes note in his discussion of the prior art of feedback means such as a green light which is flashed toward the user (column 3, lines 41-45).

10. Bard fails to show the status indication in the form of light that is projected onto the barcode.

11. Butterworth teaches projecting light onto a barcode from a barcode scanner to provide an aiming pattern (column 6, lines 37-42) on the barcode itself.

12. In view of Butterworth, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known aiming of light patterns at a barcode into the teachings of Bard because the bar code is where the user typically is looking during the scanning operation, and indicating means directed at this point are likely to grab the scanner's attention. Bard aims to place various information related to scan results before a user's eyes; Butterworth suggests a good location to place this information to get the attention of the user.

13. Re claim 2: Bard does not explicitly show a system wherein the reading result, i.e. the identity of the item scanned, is displayed to the user. However it is well known that supermarket scanning systems normally display the identity of scanned items on a screen visible to the cashier, and later convey this information to the customer in the form of a receipt.

14. In view of well-known prior art it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known display of scan results into the teachings of Bard as modified by Butterworth because it is a good means to discover transaction and scan errors.

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15. Re claim 3: Although Bard does not show a switch for turning indicating means on and off, on – off switches for lights are so old and well-known that the inclusion of such to save power when the system is not needed is obvious.

16. Re claims 4-6 and 28: Bard fails to show a means for selectively transmitting light generated by an indicating light source toward an indicia in order to form a pattern. Butterworth (column 6, lines 37-41) shows a pattern conveyed on a barcode. Butterworth has a light source 123 that can be an LED (column 3, line 40). In order to point that light in one direction, namely at the barcode, there must be a light selection and filtering means present.

17. Therefore, in view of Butterworth, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known light-selection means to obtain shapes on the barcode surface because otherwise the effect from a light source such as a diode would be to simply illuminate a wide area, conveying little information to the user. Regarding claims 5, 6, and 28 diffractive elements, diaphragms with a predetermined shape, slides, reflecting surfaces with a predetermined shape/shutter, and diffractive elements and holograms are all alternative and equivalent ways of projecting patterns onto the barcode to the old and well known filtering means shown by Butterworth.

18. Re claim 7: A light source must by necessity be present to project light onto the barcode.

19. Re claim 8: It would have been obvious to one of ordinary skill in the art at the time the invention was made use the barcode acquisition light source because it is already present and to use it saves the expense of including another light source.

20. Re claims 9, 23, 29 and 36: Bard (column 3, lines 42-44) discusses the use in prior art of a green light to indicate a successful scan. It would have been obvious to one of ordinary skill in

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the art at the time the invention was made to include the old and well-known colored light indication into the teaching of Bard because users are familiar (from driving, etc.) with the concept of moving on in response to certain colors (green) and stopping to check conditions in response to other colors (red).

21. In figure 16B, Bard shows a variety of failure conditions that are to be conveyed. Bard doesn't mention what colors are to be shown in a failure condition using the method of status indication by showing colored light as per Bard, column 3. However, if failure conditions are to be indicated, and in Bard's case they are, it would have been obvious to one of ordinary skill in the art at the time the invention was made that different colors would have to be used to indicate such than the green light to indicate success. Regarding claims 23 and 36, this is a difference of hue.

22. Re claims 12, 13 and 30: Bard fails to show a collimating lens uses to project a pattern onto the barcode.

23. Butterworth discusses (column 3, lines 15-65) a system for reading a barcode consisting of projecting a sheet of light (line 26) on the barcode which assists the user because 'the user adjusts his aim so the sheet of line forms a line through the bar code tag (lines 33-35).' This apparatus includes a collimating lens (line 38), the very same lens (see figure 1) used in the illumination optics of the acquisition means; in fact it is the very same entire projection apparatus as is used in the acquisition means.

24. In view of Butterworth, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known converging lens for projecting information to the user on the surface of the barcode into the teaching of Butterworth,

and to use the same converging lens of the acquisition light source because the projection needs to be focused onto a surface for viewing and because the optics associated with barcode acquisition are already in place. It would be cheaper to use the same optics for a second purpose.

25. Re claim 14: As has been discussed above, it would have been obvious to use the acquisition optics because they are already in place. Further, it would have been obvious indeed to use the receiving optics in projecting onto the barcode for just the same reason, namely because those optics are already present, and if a way can be devised to use optics that are already present, production will be more cost-effective.

26. Re claims 15-17 and 31: As Bard notes (column 3, lines 42 – 43) it is common in the art to use a light flashed at the operator to indicate a successful read, or alternatively or in combination, there may be a beep.

27. In view of the prior art mentioned by Bard, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known light and/beep directed at the operator of a barcode scanner into the inventive apparatus of Bard because these means ensure that an immediate result of the scan will be conveyed to the user through the sense of sight in the form of a flash of light, and in through the sense of sound in the form of a beep. These signals are hard to miss.

28. Re claims 18-21 and 32-35: Bard discusses (see column 14, lines 25-40) a display system which displays a variety of status items related to a barcode scan, a list of which is given in figure 16b. In this system, the code is read and the result of the code read is displayed to the user. The outcome that is displayed is understood to be one of those listed in figure 6, after a

discrimination step determines which it is. As figure 16b shows there is discrimination between a successful result and failure, and between a successful result and two or more failures.

29. Re claim 22: Bard fails to show a system of repeatedly trying before indicating failure. It is well known in the art that barcode scanners, especially those of the handheld variety, typically scan continuously from the time a button is pressed until it is released or an item is successfully scanned. The examiner reports that he has a scanner on his desk which performs exactly thus.

30. In view of well-known prior art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known repeated scanning technique currently in wide use into the teachings of Bard because the barcode can be positioned badly relative to the scanner during the first scan, and multiple scans from different positions therefore increase the odds of success.

31. Re claim 24: Bard fails to show a second luminous source.

32. Butterworth suggests (column 6, lines 37-41) an embodiment having a second optical source, in addition to that used to perform scanning, in the even that the one used to perform scanning is ineffective for conveying information to the user because, for example, it is not the visible spectrum.

33. In view of Butterworth, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known second light source into the teaching of Bard because the first light source may not have the optical properties to convey light well.

34. Re claim 25: The barcode scanner on this examiner's desk immediately goes after a successful scan.

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known turning of the scanning light source instantly after a successful scan because to leave the light on would waste power. On the other hand, a means that conveys scan result information to the user would remain on long enough for the user to receive it.

36. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bard as modified by Butterworth as applied to claims 7 and 18 above in further view of Foster (US 5,587,704). The teachings of Bard as modified by Butterworth have been discussed above.

37. Re claim 10: Bard as modified by Butterworth fails to show a flashing light mechanism, in other words, a mechanism that modulates the intensity of a light or turns it on or off.

38. Foster shows a flashing light which works to grab the attention of individuals who see it, in a manner that is very hard to miss (see abstract).

39. In view of Foster, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known flashing light and light of modulating intensity shown by Foster in the teachings of Bard as modified by Butterworth because as Foster illustrates, this is a great attention-grabber. It would thus have been a good way to provide important information to the operator of a barcode scanner.

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Conclusion

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Walts (US 5,648,287) shows an apparatus for notifying an operator of outcomes of barcode scans through tactile means.

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A Hess whose telephone number is (703) 305-3841. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G Lee can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

43. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



DH
February 5, 2002

Daniel A Hess
Examiner
Art Unit 2876



KARL D. FRECH
PRIMARY EXAMINER